Notes from the 9/20/05 MI BPM Upgrade Meeting
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These notes can be found in Beams docDB #1526.

Agenda as announced:

  Project Announcements : Bob and Steve
  Service Building survey/BLM coordination : Tim, Marv
  Front-end software : Luciano
  Online software : Brian
  Validation: Rob Kutschke
  MI30 status : Peter,Bob Webber
  MI BPM requirements/MI issues : Dave and Alberto
  Combiner Board status : Tim, Bob Forster, Vince
  VME crate purchase status : Bob Forster
  MVME processor status : Luciano Margaret,Steve
  Transition Board status : Manfred
  Timing Board : Bill
  AOB

0. Announcements - Bob and Steve

  - No update on the shutdown.

  - Steve is giving a talk at CD's Accelerator Activities meeting on
Tuesday at 3:00 in FCC1. All are welcome.

1. Service Building survey/BLM coordination : Tim, Marv

  - Marv gave a short talk on the status of the service building, space
for the new system, cabling and signal issues, etc. Photos are already
available and Marv sent out the address:

http://www-
cdserver.fnal.gov/cd_fnal/cep/ese/MI%20BPM/MI_Survey/MI_Pictures/index.html

  - In addition there are documents in beams-doc-1822 that give some
details of the cables and clock signals available in each house as well
as drawings of the existing racks.

  - In future details of the cables and cable runs will be added.

  - We discussed where in the racks the new system should go, which
service building should be instrumented first, etc. This is important
as we need to decide to specify and purchase cables, crates, etc. and
sooner is better.

2. Front-end software : Steve F./Luciano

  - Working on the 5500 port of the FE code and all the auxiliary
libraries, PMC card S/W, etc.

  - Luciano continues to work on the MI BPM code on the teststand.
Still some problems with crashing, doesn't yet do TBT and CO.

3. Online software : Brian

  - Brian is working with Dave, Steve, Luciano, others to define the
front-end data structures. They started with the Tevatron structures
and modified it accordingly. It is being documented.

4. Validation: Rob Kutschke

  - Rob is reading requirements documents. He is looking into what he
will need to get hold of data to work on analyzing it.

5. MI30 status/transition board : Manfred, Peter, Charlie, Bob Webber

  - The 2-channel transition board prototype was used in MI30 to take
measurements under various beam conditions.   During this testing it was
found that the 53MHz signal saturates in some cases and this was found
by looking at the position measurements.

  - The board is back in the lab, will be modified accordingly, and
retested.

  - Layout of the 8 channel board with the I/O will occur in October
and people are available for this.

  - The Bill Haynes timing board was tested, a problem in the Altera
was found and fixed, and the board is acceptable for MI BPM. It should
go into final layout and production.

  - Bob showed some plots from measurements made of pbar transfers.
These can be found in beams-doc-1958. The results in general look good.

  - One of the next steps is to try turn-by-turn. Here there was a
long discussion about Echotek filtering and decimation. I don't think
the answer to how we can collect data in all 4 Echotek channels and be
able to measure closed orbit and turn by turn measurements is known yet.
 Peter and Charlie were working on it and will continue to pursue ideas
as long as that makes sense. There is a "proof of principle" but more

work is needed here. Bob suggests that the MI software be implemented in MI30 as soon as possible.

   - Charlie discussed the 5500 port in driver support, VxWorks, PMC and PMC UCD, etc. Progress has been made but more needs to be done to complete the port.

6. Combiner Board status : Tim, Bob Forster, Vince

   - 25 boards have been installed in their aluminum boxes and tested. 22 (+ 1 reference) box passed tests. 2 failed and are being investigated.

   - These boxes will be installed whenever access is available. The old boxes will be pulled out, surveyed, moved to FCC, and boards will be installed and tested and made ready for the next access and installation. The order of installation is MI50->MI40->MI30-> etc.

   - So far 101 boards are available. The remaining boards will be manufactured as soon as the "missing" components are received by the board house. Should be late November.

7. VME crate purchase status : Bob Forster

   - The purchase req. is still in the Directorate. Bakul will chase the requisition and we should get it into purchasing soon.

   - DAWN will offer more capabilities for crate monitoring in the crates that they will bid.

8. MI BPM requirements - Alberto and Dave

   - Some new comments were sent by Margaret. Alberto had just enough time to begin the detailed discussion.

   - Alberto will send out a mail giving a time and location to engage in a more extensive discussion of the MI BPM requirements. (Since done -- Friday Sept 23, 10:30-12:00, Dungeon.)